

Piezo Stages

VenusLab Piezo Multi-Axis Stages

Integrated Multi-Dimensional Nanopositioning Systems

- High speed XY + 6 axis parallel motion, zero cumulative error.
- Monolithic structure, 15kg load at 50nm resolution.



One Platform Many Possibilities

Contact Us sales@venuslabtech.com

Get a Quote



Get Expert Advice
+65 8099 5547



Visit Us
www.venuslabtech.com

Overview

Mastering Complex Motion in Nanometers

VenusLab Multi-Axis Stages provide a unified solution for complex spatial positioning tasks. Whether requiring large-travel 2D scanning or precise 6D alignment, our integrated systems combine high stiffness with ultrasonic piezo drives to ensure superior orthogonality and stability for the most demanding multi-degree-of-freedom applications.

Applications

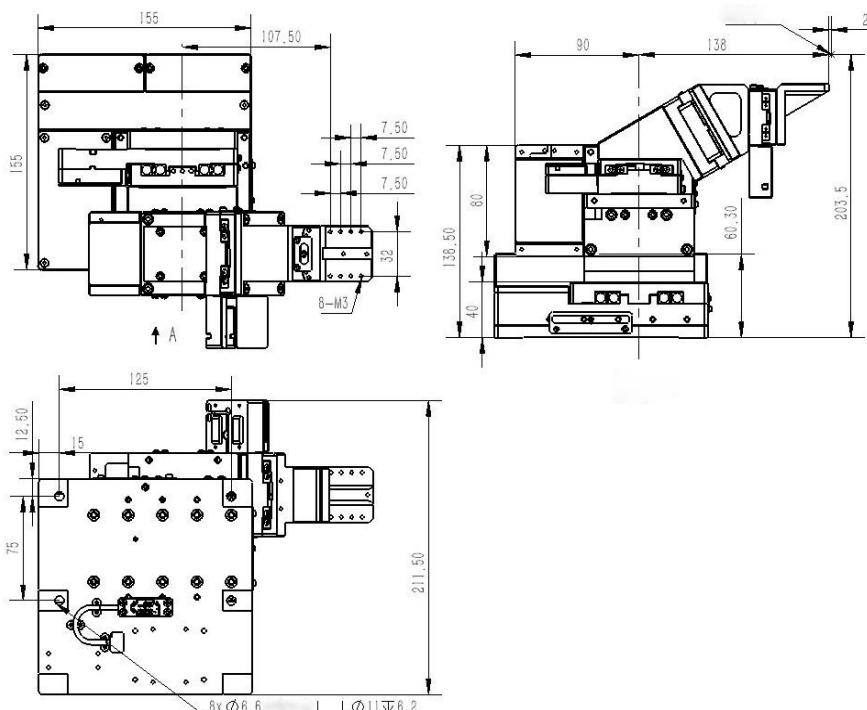
- Silicon Photonics Alignment
- Wafer Metrology & Inspection
- 3D Laser Micro-machining
- Space Component Simulation

Technical Specifications

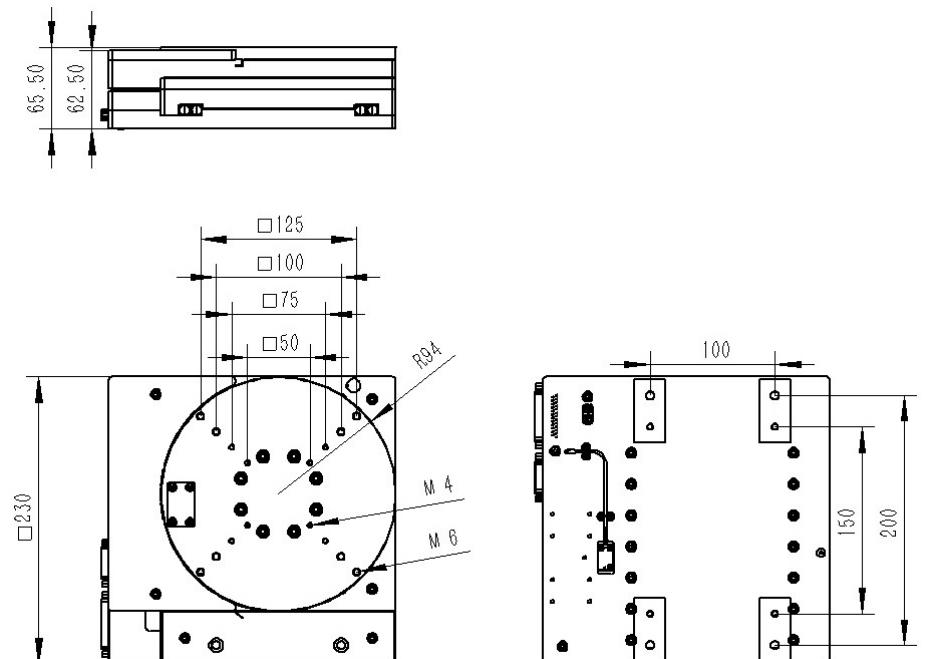
Model Name	Travel Range (mm/°)	Drive Type	Max Load (kg)	Max Speed (mm/s)	Min Step (Resolution)	Repeatability	Sensor
VL-6D-2520	XY:±12.5, Z:±10, R:±5°	Piezo	1.0	20	100 nm	+/- 300 nm	Grating
VL-XYZ-2020-HD	20 * 20 * 20	Piezo	15	40	100 nm	+/- 300 nm	Grating
VL-XY-2020	20 * 20	Piezo	N/A	100	100 nm	+/- 300 nm	Grating
VL-XY-150150-HD	150 * 150	Piezo	10.0	50	50 nm	+/- 200 nm	Grating
VL-XY-105105	105 * 105	Piezo	2.0	100	50 nm	+/- 200 nm	Grating
VL-SYS-11075-Z05	110 * 75 * 5	Piezo	N/A	N/A	50 nm	+/- 200 nm	Grating
VL-XY-11075-IX	110 * 75	Piezo	1.0	100	50 nm	+/- 200 nm	Grating
VL-XY-11075	110 * 75	Piezo	1.0	100	50 nm	+/- 200 nm	Grating
VL-XY-7575	75 * 75	Piezo	3.0	100	50 nm	+/- 200 nm	Grating
VL-XY-7550	75 * 50	Piezo	1.0	20	100 nm	+/- 300 nm	Grating
VL-SYS-5050-Z12	XY:±25, Z:±6	Piezo	2	30	50 nm	+/- 200 nm	Grating
VL-SYS-5050-R100	XY:±25, R:±6°	Piezo	10	30	100 nm / 0.0005°	+/- 200 nm	Grating
VL-XY-5050	50 * 50	Piezo	5.0	100	50 nm	+/- 200 nm	Grating
VL-XY2-7550	75 * 50	Piezo	1.0	100	50 nm	+/- 200 nm	Grating
VL-SYS-2525-Z06	XY:±12.5, Z:±3	Piezo	0.5	30	50 nm	+/- 200 nm	Grating
VL-XY-5025	50 * 25	Piezo	1.0	100	50 nm	+/- 200 nm	Grating
VL-SYS-0505-XYZ	5 * 5 * 5	Piezo	0.3	30	100 nm	+/- 200 nm	Grating
VL-6D-5020-E	50x50x20, ±5°	Piezo	0.5	20	10-100 nm	+/- 100-300 nm	Grating

Mechanical Dimensions

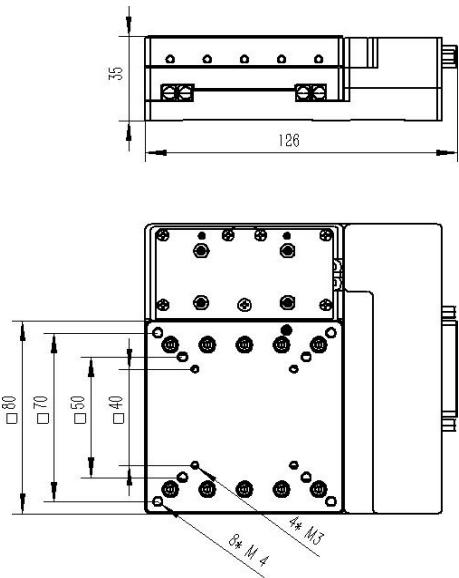
VL-6D-2520



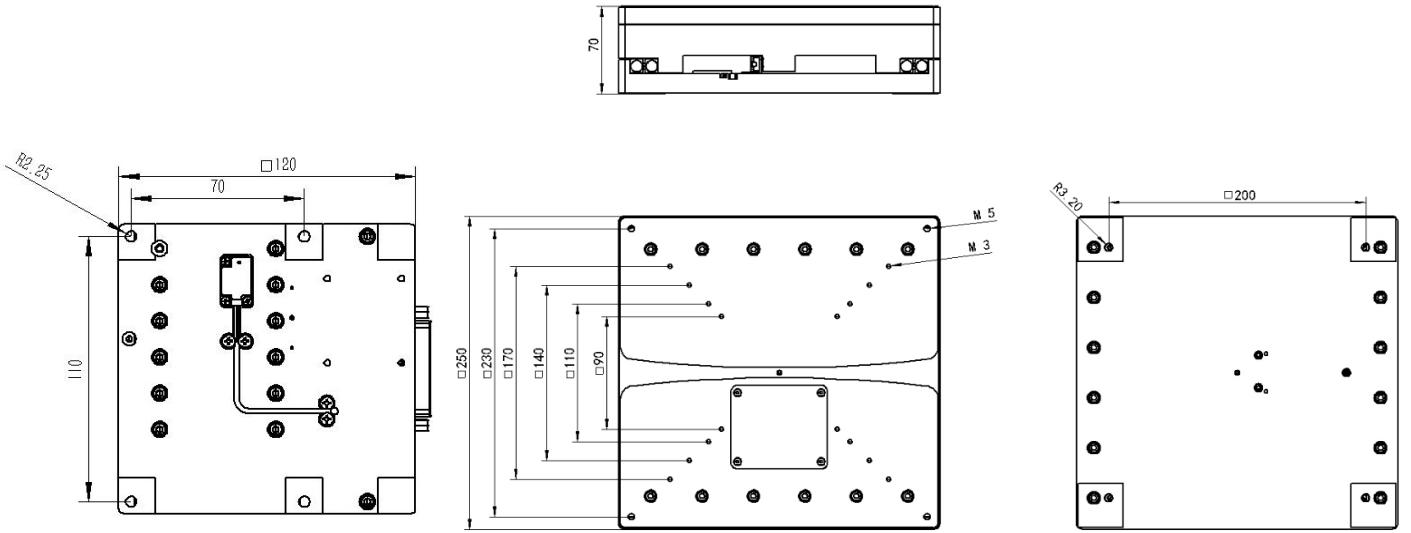
VL-XYZ-2020-HD



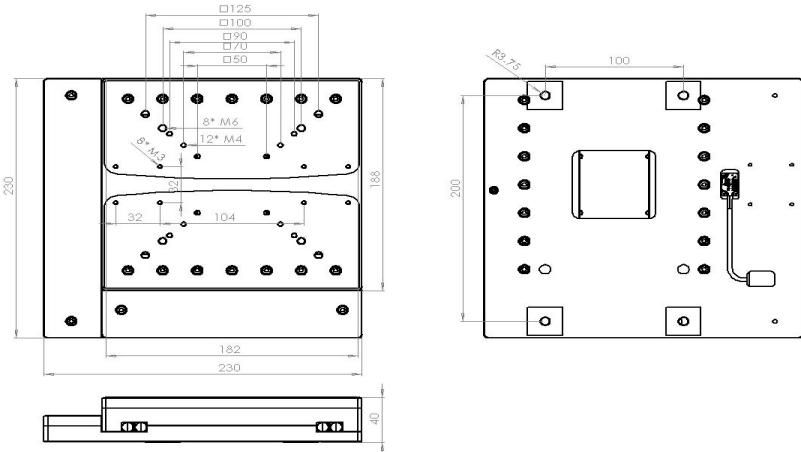
VL-XY-2020



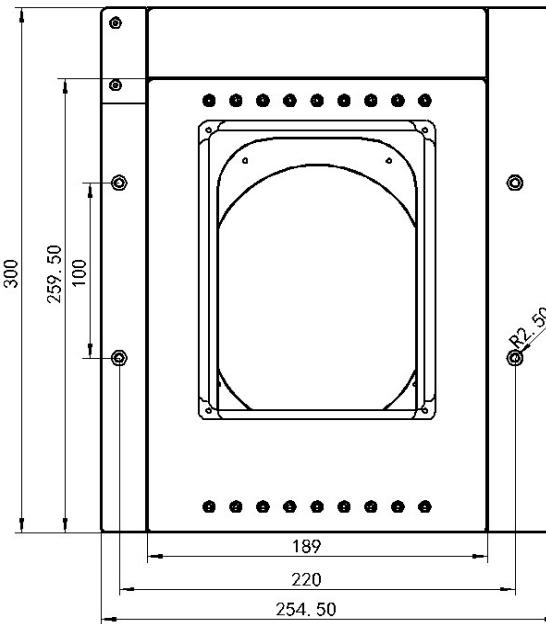
VL-XY-150150-HD



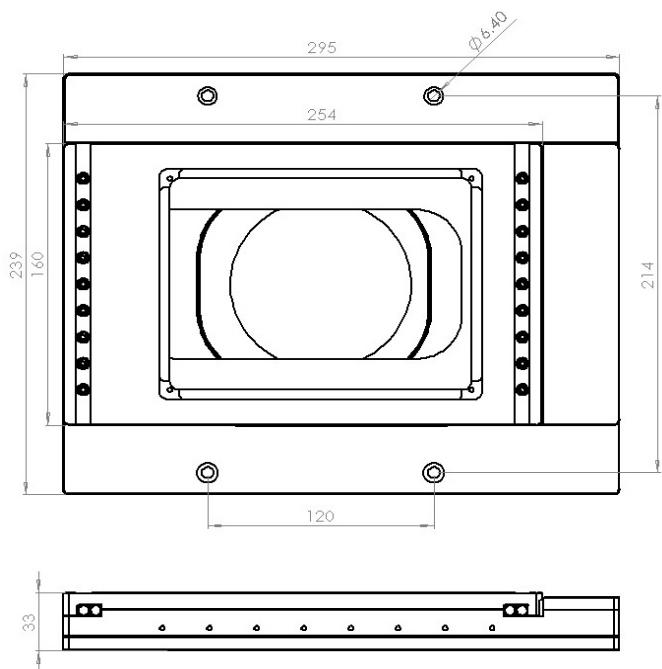
VL-XY-105105



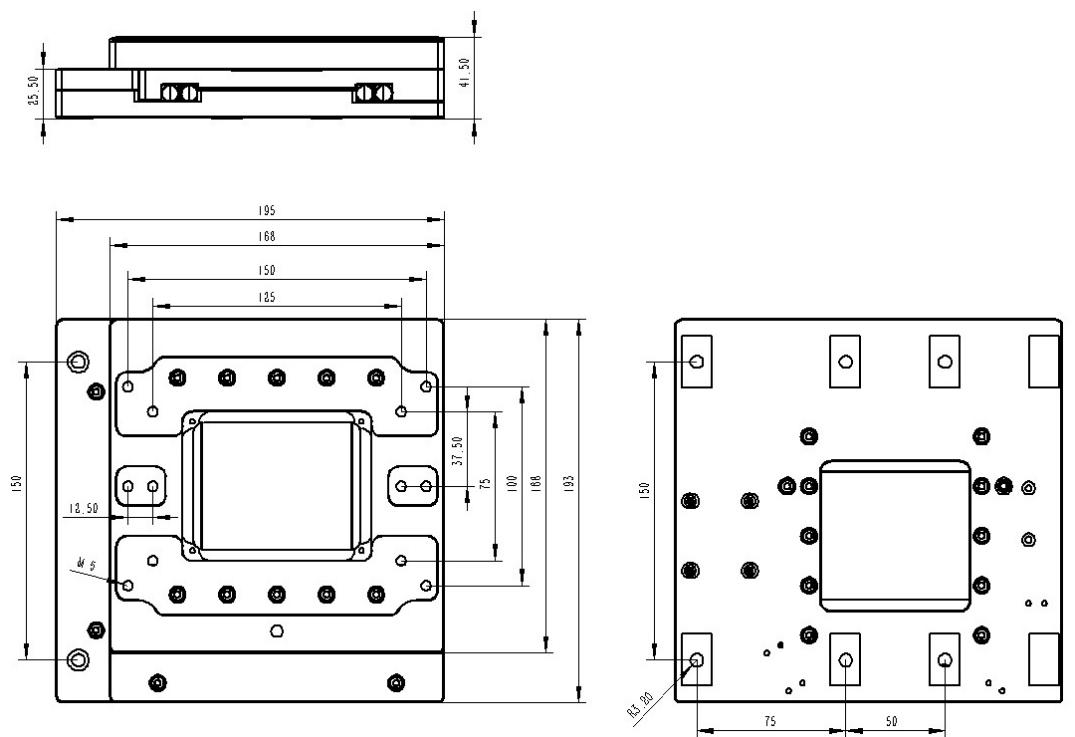
VL-XY-11075-IX



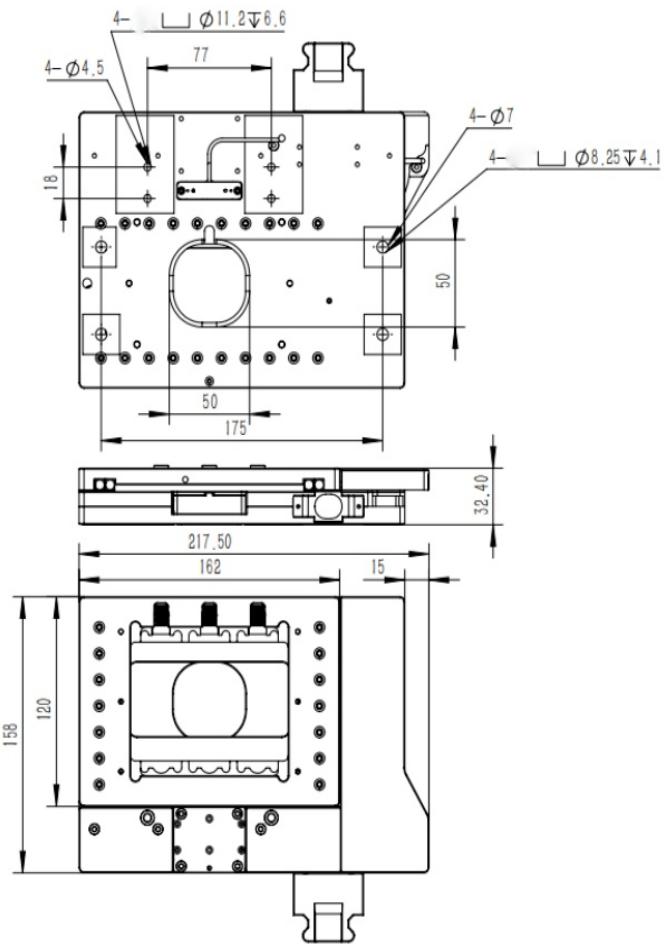
VL-XY-11075



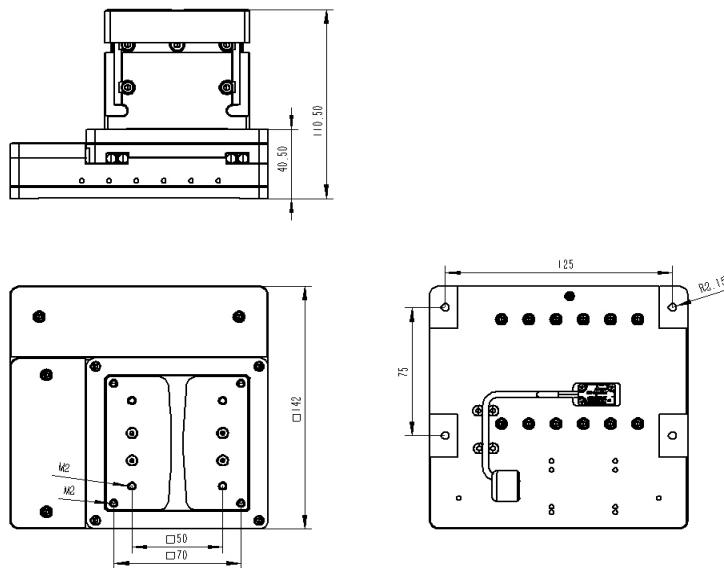
VL-XY-7575



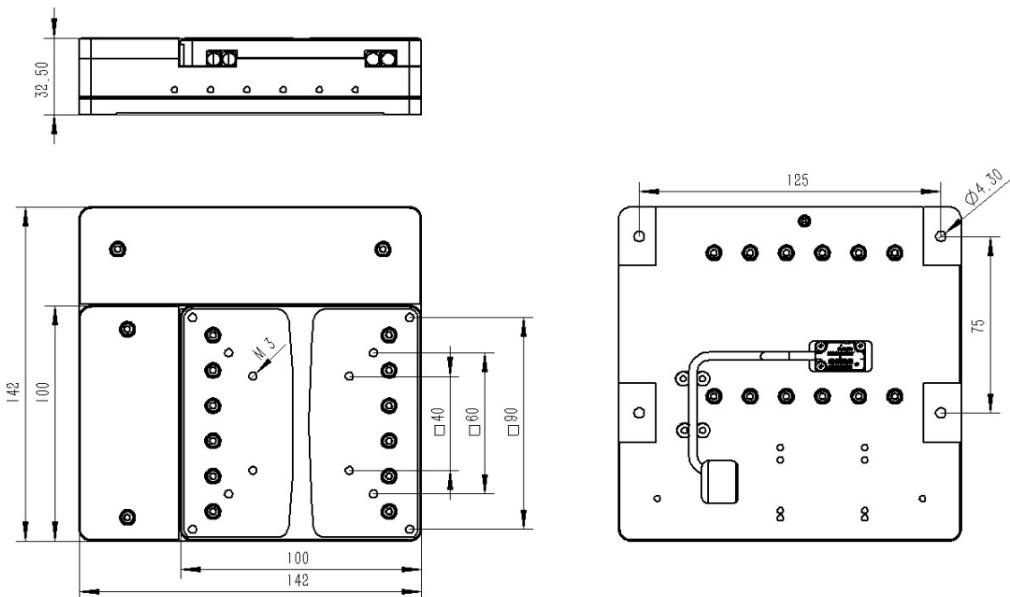
VL-XY-7550



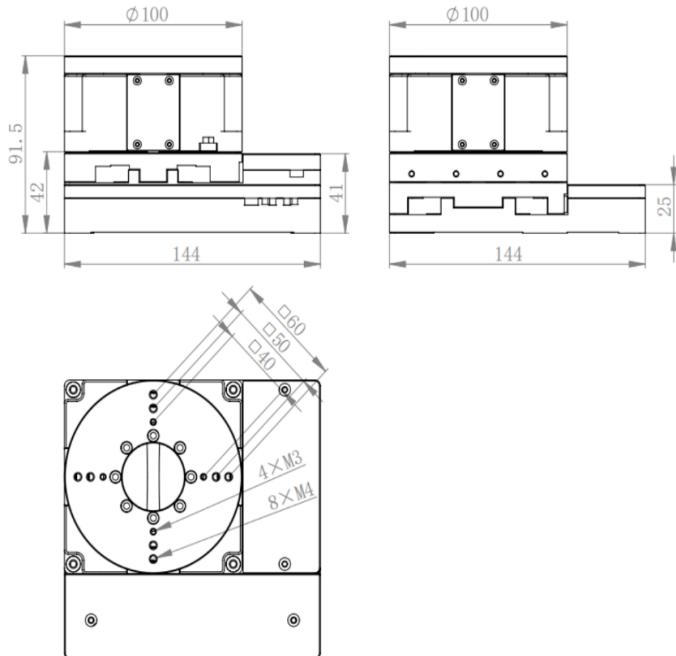
VL-SYS-5050-Z12



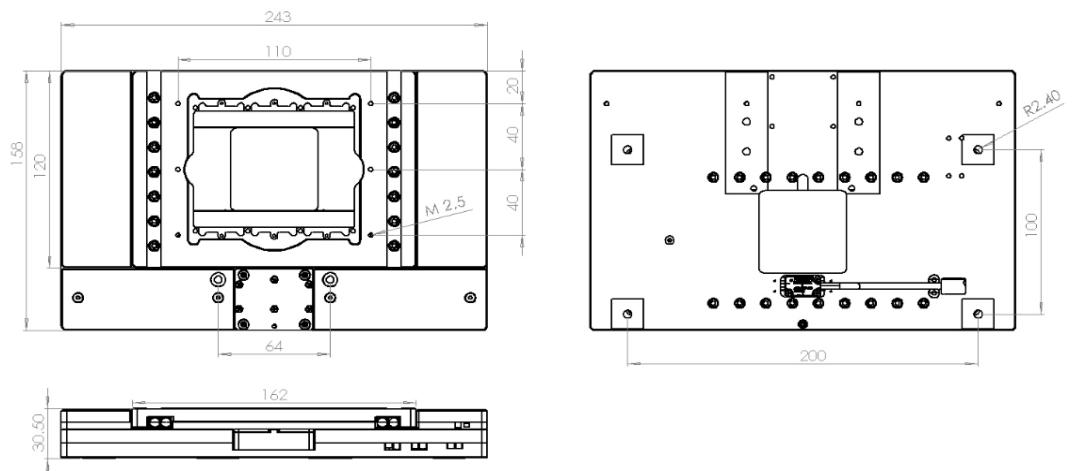
VL-XY-5050



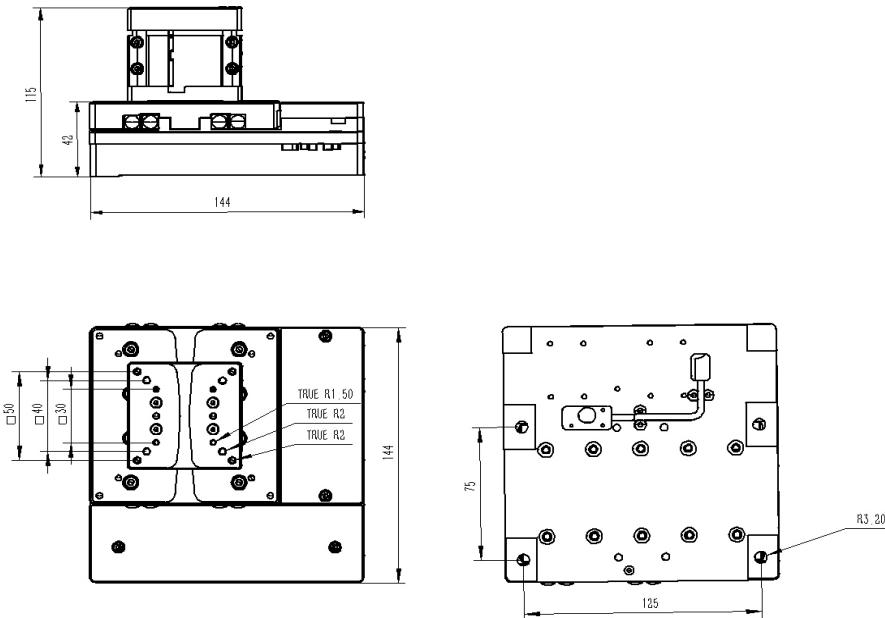
VL-SYS-5050-R100



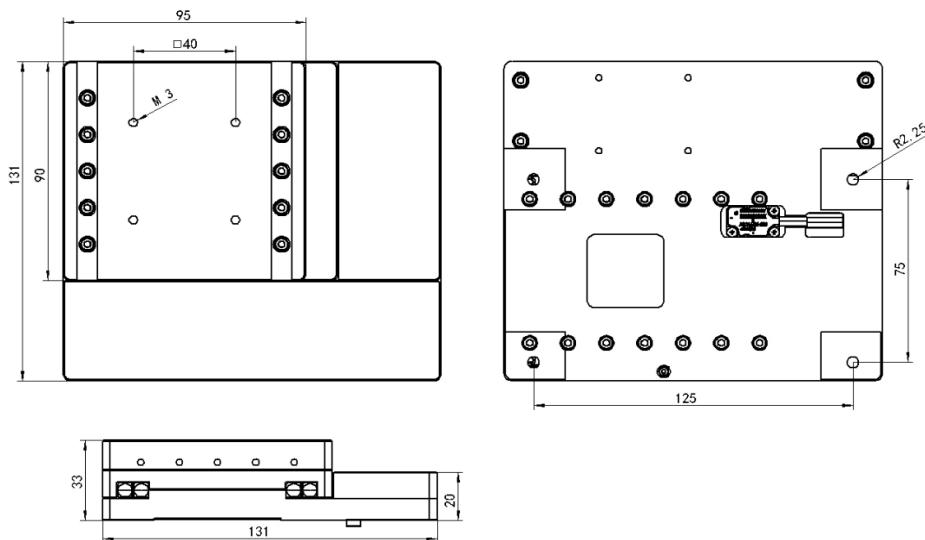
VL-XY2-7550



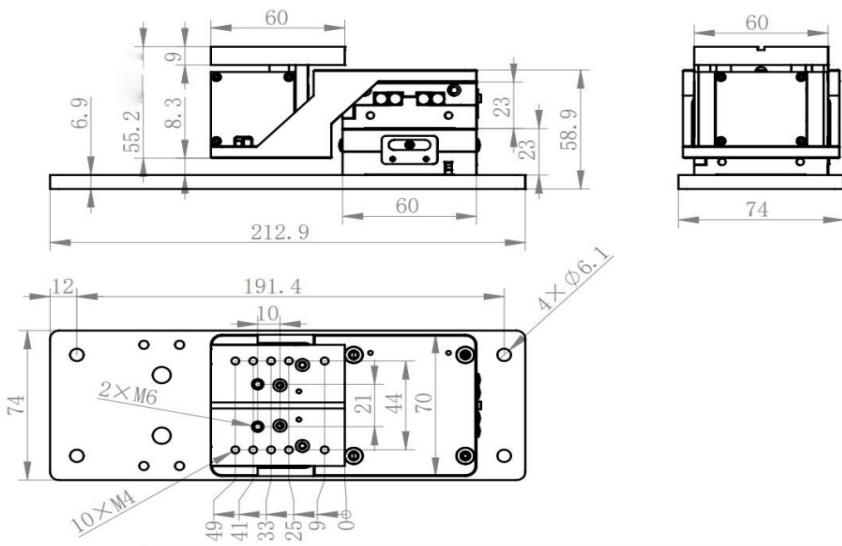
VL-SYS-2525-Z06



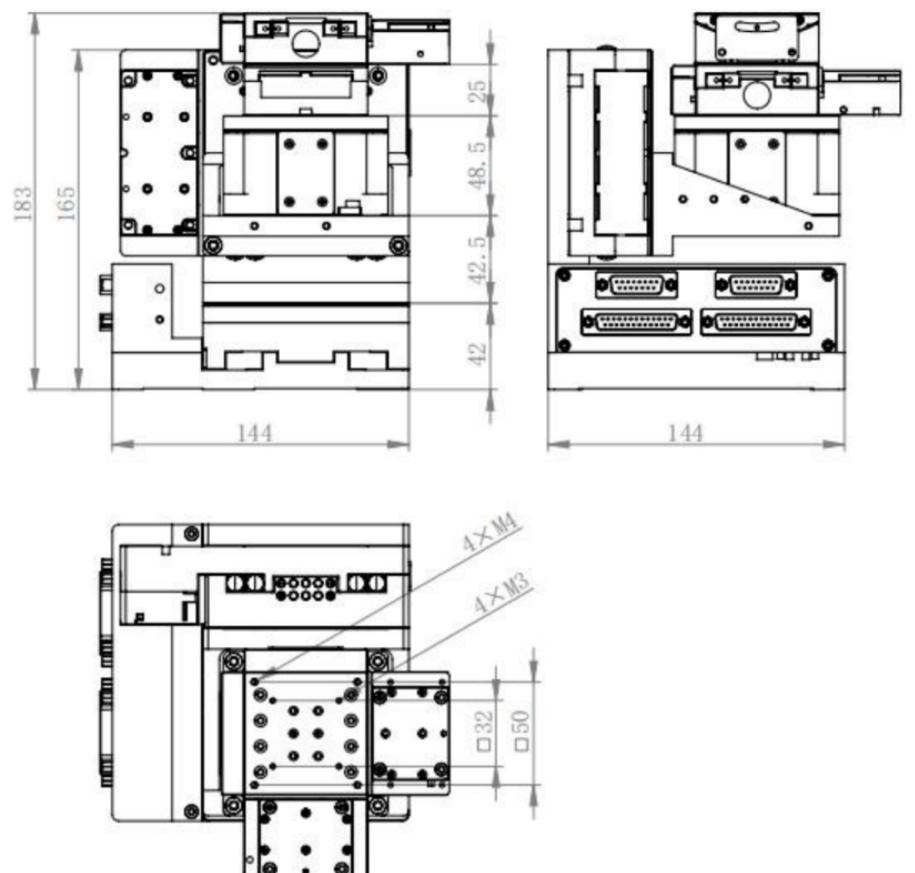
VL-XY-5025



VL-SYS-0505-XYZ



VL-6D-5020-E



Service & Support

We are dedicated to delivering exceptional optoelectronic solutions to every client. From precision manufacturing and secure delivery to full-lifecycle technical support, we are here to ensure a seamless and reliable experience at every step.

1. Warranty Policy

Quality First, Worry-Free Operation

- **Warranty Period:** We offer a **two-year** warranty service for all of our core optoelectronic products, effective from the date of shipment.
- **Coverage:** We provide free repair or replacement services for malfunctions caused by material defects or workmanship errors under normal operating conditions.
- **Rapid Response:** Upon receiving a warranty claim, we guarantee to initiate the assessment process within **24 hours** to minimize your equipment downtime.

2. Technical Support

Expert Team, Full-Process Guidance

- **Technical Consultation:** Our team of senior optical engineers provides **24/7 online support** to assist with installation, commissioning, optical path alignment, and parameter optimization.
- **Scheduled Maintenance:** We offer full-lifecycle maintenance recommendations, including firmware upgrades, optical component cleaning guidelines, and precision calibration services.
- **Training Services:** We provide customized remote or on-site operational and safety training to ensure your team can operate the equipment efficiently and safely.

3. Logistics & Delivery

Precision Packaging, Global Reach

- **Professional Packaging:** Given the fragile nature of optical instruments, we utilize industrial-grade shockproof, anti-static, and moisture-proof vacuum packaging to ensure zero damage during transit.
- **Logistics Partners:** We partner with top-tier global logistics providers (**DHL / FedEx / UPS / SF Express**) to offer reliable shipping with real-time tracking.
- **Shipping Insurance:** All shipments are fully insured to eliminate logistics risks.

4. Compliance & Certification

Strict Standards, Total Compliance

Quality Certification: Our manufacturing process is **ISO 9001 certified**, and our products comply with international standards such as **CE and RoHS**.

Export Compliance: "Committed to environmental responsibility, all our products comply with **RoHS 2.0 and REACH** standards, ensuring safety and global compliance."

Explore Series

Model	Repeatability	Travel Range	Max Load (kg)	Max Speed (mm/s)
VL-6D-2520	+/- 300 nm	XY: ±12.5mm Z: ±10mm R: ±5°	1.0	20
VL-XYZ-2020-HD	+/- 300 nm	20 x 20 x 20 mm	15.0	40
VL-XY-150150-HD	+/- 200 nm	150 x 150 mm	10.0	50
VL-SYS-11075-Z05	+/- 200 nm	X: 110mm Y: 75mm Z: 5mm	N/A	100 (XY)

 Get in touch with our team to explore configurations, request a quote, or learn more about customized solutions tailored to your needs.

Let us help you move science forward—faster and smarter.

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